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A Comparison of Economic Growth in Nebraska and the Plains

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The Plains states have exhibited moderate economic growth over the past 25 years. Minnesota has been the leader, while Nebraska has fallen in the middle of the pack. Nebraska led the region in farm income growth and in farm gross product growth, but displayed lackluster performance in the nonfarm area. Indeed, Nebraska's strong farm sector prevented the state from finishing toward the bottom of the region in several broad economic categories. Recent efforts to stimulate nonfarm industries are a direct response to this record.

The position of Nebraska's economy relative to those of neighboring states is an important element in assessing the state's past performance and future directions. Differences in historical growth patterns among states within a region provide signals to individuals and firms that help determine locational preferences. Whether the legacy of growth in a state is dynamic, moderate, or sluggish is a major determinant of whether development aspirations for the future are within reason.

Growth records are determined by many local factors, including resource endowments, degrees of specialization in various industrial activities, labor force skill levels, and public infrastructure. National and international influences determine the general paths of state economies within constraints represented by local characteristics. A substantial part of the credit (or blame) for economic trends that may exceed (or fall short of) those of neighboring states can not be assigned.

The Plains region consists of Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota. Although other state groups may be of interest, the choice of the Plains region for this study was not arbitrary. The Plains region is one of the standard state groups used by the Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce. All data used in this article are from BEA. On the basis of these data, comparisons are made for a set of broad economic indicators that consists of gross state product, income, and employment. Data from a quarter century time span are used to emphasize long-term trends.

The region tends to lag the nation in overall growth. When the relatively slow growth of population is considered, however, per capita measures of growth put the region and Nebraska on par with national growth rates. Although relative gaps in

State Economic Scoreboard

Change from same month one year ago.
See Review and Outlook on page 9 for more details.

	State	Metro+	Nonmetro
Motor Vehicle Sales (March) Constant $	-3.6%	-5.8%	-1.7%
Nonmotor Vehicle Sales (March) Constant $	4.1%	6.1%	2.2%
Building Activity (March) Constant $	13.2%	4.8%	28.6%
Employment (May)	0.8%	1.2%	0.4%
Unemployment Rate* (May)	2.5%	2.6%	2.5%

+Omaha and Lincoln. *Unemployment is this month's rate, not a percent change from year ago.

Table 1
Average Annual Growth Rates of Real Gross State Product
1963-1986 (in percent)

Industry	Iowa	Kansas	Minnesota	Missouri	Nebraska	North Dakota	South Dakota	Plains	U.S.
Farming	3.2	4.3	2.9	2.3	5.5	5.1	3.6	3.0	1.8
Agricultural Services	1.4	1.2	2.3	2.5	2.1	3.5	1.5	1.8	2.7
Mining	0.1	-4.7	-1.5	3.2	-7.5	2.9	4.4	-2.7	0.6
Construction	-2.6	-0.9	-1.3	-1.4	-2.3	0.0	-2.4	-1.6	0.0
Durables-Mfg	4.9	4.6	6.6	4.1	5.9	11.8	9.2	5.1	3.6
Nondurables—Mfg	3.4	3.8	3.8	2.8	3.8	6.6	3.9	3.4	2.9
TCU*	2.1	3.5	3.2	2.9	3.4	3.1	3.1	3.0	3.7
Wholesale Trade	3.5	5.1	4.6	3.1	4.2	4.0	3.3	3.9	4.5
Retail Trade	1.6	2.5	3.3	2.9	2.1	1.7	2.0	2.6	3.4
FIRE**	2.3	3.0	3.6	2.9	2.8	3.2	2.8	3.0	3.7
Services	3.1	4.0	4.3	3.7	3.5	4.0	3.5	3.8	4.4
Government	2.3	2.2	2.5	1.8	1.7	3.9	0.8	2.1	1.9
Total GSP	2.3	2.3	3.4	2.6	2.6	2.7	2.2	2.7	3.0
Per Capita GSP	2.2	1.9	2.6	2.0	2.3	2.5	2.2	2.2	1.9
GSP Per Employee	1.0	0.4	0.8	0.7	0.8	1.2	1.2	0.8	0.5

*Transportation, Communication, Utilities
**Finance, Insurance, and Real Estate

various economic measures have been fairly stable over the past two and a half decades, the absolute gaps have widened. Maintaining parity in growth is important. Closing the absolute gaps will require renewed efforts, changing directions, and perhaps some good luck as well.

Gross State Product

Gross State Product (GSP) is the gross market value of goods and services produced by the land, capital, and labor utilized within a state. It is the most comprehensive measure of economic activity at the state level, and it is the state analog of the U.S. Gross National Product. Although the concept of GSP has been recognized by regional economists for some time, BEA only recently has calculated and released official GSP figures for all states. Prior to the federal release, most states had prepared their own estimates of GSP. The official BEA GSP figures are consistent across states and allow interstate comparisons of economic growth and performance. Unfortunately, the BEA figures are only available through 1986. The comprehensive character of the GSP measure, however, outweighs any shortcomings in timeliness.

Table 1 contains the average annual growth rates of GSP by industry in the Plains states from 1963-1986. Growth rates for the region and the U.S. also are given, as are growth rates for total GSP, per capita GSP, and GSP per employee. The GSP data from which the rates are computed are in real terms, i.e., the effects of price inflation in the industries have been removed. All the growth rate figures in Table 1 and in subsequent tables of this article are average annual growth rates. It is important to keep in mind when analyzing these comparisons that the rankings of average rates can change if a state or group of states has an unusually good or bad year.

Although the emphasis is upon growth rates over a lengthy span of time, some perspective of the sizes of the state economies is gained by noting the GSP levels in real terms for the terminal year 1986. For the Plains region, GSP reached $261.2 billion in 1986. The GSP totals (and percent of the Plains total) for the region were: Iowa, $40.4 billion (15.5 percent); Kansas, $37.8 billion (14.5 percent); Minnesota, $68.1 billion (26.1 percent); Missouri, $72.6 billion (27.8 percent); Nebraska, $23.7 billion (9.1 percent); North Dakota, $9.8 billion (3.8 percent); and South Dakota, $8.8 billion (3.4 percent). The relative position of Nebraska's GSP in the Plains region has remained virtually unchanged since 1963.

Farming is the first industry listed in Table 1. Nebraska's growth rate of 5.5 percent in farm gross product led the region. Farming is the only industry in which Nebraska's growth rate topped the states in the region. North Dakota's growth rate in farming of 5.1 percent closely followed that of Nebraska, while Missouri trailed at 2.3 percent. Gross product in the farm sector has been extremely volatile over the past quarter cen-

tury, making summary measures of growth over the period sensitive to episodes of boom and bust.

The growth rate of total GSP in the Plains region of 2.7 percent was slightly below the 3.0 percent growth rate of the nation over the period. Nebraska's GSP growth rate of 2.6 percent rate placed the state in the middle of the region. Minnesota's 3.4 percent rate was the only growth rate in the region that exceeded the national rate. South Dakota had the lowest growth rate (2.2 percent) for the study period. Although the differences in growth rates among the states may seem miniscule, the rates are averages from the period 1963-1986. Thus, minor differences in the average annual rates reflect substantial widening in the differences of gross product totals across states and with respect to the nation. The Plains region gross product has not kept pace with that of the nation over the period.

When growth in GSP is measured on a per capita basis, all the Plains states except Kansas outperformed the U.S. rate of 1.9 percent over the period. Population growth in each of the Plains states lagged that of the U.S. by a degree sufficient to offset the state growth rates in production values that had lagged the U.S. rate. In relation to the other Plains states, Nebraska finished third on the per capita basis, the same relative position as the total gross product measure.

Farming was Nebraska's only industry that led all other states in the region in average annual growth rate of gross product. At the other end of the spectrum, Nebraska's mining industry suffered the worst decline of any industry in the region over the period. That downturn reflects the peak of the Nebraska oil and gas sector (classified in the mining industry) in the 1960s and a subsequent nosedive in annual production values. Construction in Nebraska also suffered a substantial decrease at an average annual rate of 2.3 percent.

The remaining industries in Nebraska all had positive growth over the period, with durables manufacturing posting the highest average annual rate of 5.9 percent. This rate placed Nebraska fourth among the seven states. North Dakota led in durables manufacturing with a staggering growth rate of 11.8 percent.

The second highest growth industry in Nebraska was farming, followed by wholesale trade in third position with a growth rate of 4.2 percent for the period. Kansas and Minnesota surpassed Nebraska in wholesale trade, as did the U.S. Nondurables manufacturing was the fourth fastest growing industry in Nebraska with a rate of 3.8 percent.

Services mustered a fifth place finish with a 3.5 percent growth rate. Only Iowa had a lower growth rate than Nebraska in the services industry. Minnesota bested the region in services with a 4.3 percent growth rate, but this performance was below the U.S. rate. The Nebraska industry with the slowest positive growth was government at 1.7 percent. Only South Dakota had a lower rate of growth in government.

In summary, Nebraska was in the middle of the Plains states in gross product growth rates for the 1963-1986 period. Nebraska excelled in the farming industry, but suffered a dramatic long-term decline in the mining industry. Minnesota stands out as the clear leader in the region in growth of gross product over the past quarter century. A pattern of strength across industries, with the exception of construction and mining, is apparent in Minnesota's performance during the period.

In many ways, Minnesota does not have the general characteristics of a Plains state. While it does have a large agricultural sector, its nonagricultural mix is more like that of an industrial state. Furthermore, Minnesota has a significant amount of high tech and financial businesses. Minnesota is the only Plains state with major metropolitan areas, except Missouri. Minneapolis-St. Paul and St. Louis, Missouri have populations that exceed two million persons.

Real Personal Income and Population

Personal income is another broad indicator of a region's economic health. The major components of personal income are labor compensation; proprietors' income; dividends, interest, and rent; and transfer payments. Personal contributions to social insurance are deducted from the total. Corporate profits are not included, because they can not be assigned to individuals. As in the GSP comparisons above, the personal income data are in real terms. Conversion to real terms using the Consumer Price Index removes the effects of inflation. Personal income figures are available through 1988.

Table 2 contains the average annual growth rates of several income measures and population over the 1963-1988 period for the states in the Plains region, the region as a whole, and the U.S. On the basis of growth in total personal income, Minnesota again leads the region by a substantial margin. Minnesota's growth rate of 3.2 percent on an annual basis is .5 percentage point above that of Kansas and Missouri. Nebraska lagged the trio with a 2.5 percent rate, again ranking in the middle of the region (as was the case with growth in GSP). All the state growth rates fell short of the 3.3 percent mark of the U.S. Thus, the region's income growth lost ground compared to the nation.

Table 2
Average Annual Growth Rates of Real Income and Population
1963-1988 (in percent)

	Iowa	Kansas	Minnesota	Missouri	Nebraska	North Dakota	South Dakota	Plains	U.S.
Total Personal Income	2.1	2.7	3.2	2.7	2.5	2.3	2.2	2.7	3.3
Nonfarm Personal Income	2.5	2.8	3.4	2.9	2.5	2.9	2.7	2.9	3.3
Population	0.1	0.5	0.8	0.6	0.3	0.1	0.0	0.5	1.1
Per Capita Personal Income	2.0	2.3	2.4	2.1	2.2	2.2	2.2	2.2	2.2

Table 3
Average Annual Growth Rates in Employment
1969-1987 (in percent)

Industry	Iowa	Kansas	Minnesota	Missouri	Nebraska	North Dakota	South Dakota	Plains	U.S.
Farming	-1.1	-0.8	-0.3	-0.9	-0.8	-1.5	-1.8	-0.9	-1.0
Agricultural Services	1.1	1.4	5.4	5.3	4.3	2.4	1.2	3.2	5.2
Mining	-1.5	3.9	-3.3	-1.7	0.9	6.3	0.2	0.8	2.1
Construction	0.1	2.1	2.1	2.3	0.8	2.9	2.0	1.7	2.6
Durables—Mfg	-0.1	1.0	1.2	-0.3	.0	4.9	6.3	0.4	-0.1
Nondurables—Mfg	-0.2	1.6	0.7	-0.6	1.0	2.7	1.2	0.3	-0.2
TCU*	0.6	1.4	1.3	1.0	1.3	2.0	1.4	1.1	1.4
Wholesale Trade	2.7	3.7	2.4	1.2	3.3	3.4	3.1	2.3	2.4
Retail Trade	1.1	1.6	2.7	2.0	1.2	1.8	1.4	1.9	2.6
FIRE**	3.1	4.3	4.5	3.1	3.9	3.8	4.5	3.7	4.3
Services	3.1	3.7	4.4	4.0	3.3	3.9	3.1	3.8	4.1
Government	1.0	1.0	1.3	0.9	1.2	0.6	0.3	1.0	1.2
Total Employment	1.1	1.9	2.3	1.6	1.6	1.7	1.3	1.7	2.1

*Transportation, Communication, Utilities
**Finance, Insurance, and Real Estate

Nebraska's relative position among the Plains states deteriorates when the focus shifts from total personal income to nonfarm personal income. In the nonfarm portion of income, Nebraska and Iowa are at the bottom of the Plains group with 2.5 percent growth rates. The Plains and U.S. nonfarm personal income growth rates were 2.9 and 3.3 percent, respectively. Nebraska slipped from fourth position in total personal income growth to sixth in nonfarm personal income growth while maintaining the same growth rate of 2.5 percent in both categories. This is another indication that the state's farm sector has enjoyed stronger growth than those of the other states in the region.

The rate of nonfarm personal income growth was above that of total personal income growth in all the Plains states except Nebraska. Farm income behaved erratically in all states, occasionally showing year-to-year gains of over 100 percent. Precipitous declines also occurred during the 25 year span. A pattern of boom and bust has characterized farm income in the Plains states. The growth rate gap between total and nonfarm personal income in the other six states in the region, however, shows that their farm incomes did not keep pace over the period with the nonfarm portions of total personal income. The term *farm income* is a net concept. Farm personal income is derived from the net of gross receipts and gross costs.

A wide range of population growth rates has occurred across the Plains states over the past quarter century. Minnesota's population grew at an average annual rate of 0.8 percent. Missouri and Kansas followed at 0.6 percent and 0.5 percent, respectively. Nebraska was fourth with a 0.3 percent growth rate, while Iowa and North Dakota showed only minor population growth rates of 0.1 percent annually. The growth rates of the Plains states and of the region lagged the nation's growth rate of 1.1 percent by significant amounts.

Before labeling the Plains states as a laggard region with respect to the nation or Nebraska as a laggard state with respect to the Plains, the long-run performance of per capita personal income must be considered. Table 2 provides this information. Minnesota leads again with a 2.4 percent growth rate, followed by Missouri at 2.3 percent. Three states including Nebraska share the third position with a 2.2 percent growth rate. That rate equals the rate of the Plains region and that of the nation over the period. In per capita terms, Nebraska's personal income kept pace with the region, and the region's personal income kept pace with the nation.

There are two dimensions of this growth rate equivalence that may be cause for concern. First, Nebraska maintained its growth rate by offsetting below average growth in total income with below average growth in population. Second, Nebraska's per capita personal income is below that of the nation. Assuming that the equivalence of growth rates can be maintained, there will be a widening absolute gap between Nebraska and the nation in the levels of per capita income. Some appreciation of the prevailing gap can be gleaned from the 1988 levels of per capita income. In Nebraska, real per capita income for 1988 was $12,835 (fourth in the region) while the levels for the Plains region and the nation were $13,098 and $13,900, respectively.

Employment

Several sources of employment data are available at the state level, differing by

Table 4
State Rankings in the Plains Region+

Item	Iowa	Kansas	Minnesota	Missouri	Nebraska	North Dakota	South Dakota
Gross State Product (AAGR, 1963-1986)*	5	5	1	3	3	2	7
Gross State Product Per Capita (AAGR, 1963-1986)	4	7	1	6	3	2	4
Gross State Product Per Employee (AAGR, 1963-1986)	3	7	4	6	4	1	1
Total Personal Income (AAGR, 1963-1988)	7	2	1	2	4	5	6
Nonfarm Income (AAGR, 1963-1988)	6	4	1	2	6	2	5
Population (AAGR, 1963-1988)	5	3	1	2	4	5	7
Per Capita Income (AAGR, 1963-1988)	7	2	1	6	3	3	3
Per Capita Income (1988 level)	5	2	1	3	4	6	7
Total Employment (AAGR, 1969-1987)	7	2	1	4	4	3	6

*AAGR-Average Annual Growth Rate
+Ranking ties occur at tenth of a percent

the object and extent of coverage. The Nebraska Department of Labor routinely compiles the number of wage and salary jobs (not employed persons) in nonagricultural industries and the total number of employed Nebraskans (not jobs). A third basis of coverage is state employment data from BEA. The BEA employment data will be used here. The BEA statistic is a count of the total number of jobs in the state. Proprietors are included in the count, as well as all wage and salary jobs. These job counts are not the same as the number of employed persons. Persons can hold multiple wage and salary jobs or have a mixture of proprietorships and wage and salary jobs.

Nebraska employment on the BEA basis reached 913,657 in 1987, 9.2 percent of the Plains total of 9,951,885. Employment (and percent of region total) were: Iowa, 1.533 million (15.4 percent); Kansas, 1.406 million (14.1 percent); Minnesota, 2.487 million (25.0 percent); Missouri, 2.874 million (28.9 percent); North Dakota, 364 million (3.7 percent); and South Dakota, 374 million (3.8 percent).

Table 3 contains the average annual growth rates in employment by industry for the states of the Plains region, the region, and the nation over the 1969-1987 period. Nebraska's rate of 1.6 percent ranked fourth in the region, well below the national growth rate of 2.1 percent per year. Minnesota led in the total employment category with a 2.3 percent growth rate, the only Plains state to exceed the national rate. Iowa was at the bottom of the group with a growth rate of 1.1 percent.

Table 3 reveals that Nebraska did not lead any of the industries in employment growth rates. The highest finish for Nebraska was second in the government classification and a tie for second in farming. All the Plains states had long-term declines, rather than positive growth, in farm employment over the period. The Dakotas experienced severe rates of decline in the farm category. Nebraska's third place rankings came in agricultural services, mining, and wholesale trade. In services (an industry that experienced strong employment growth at the national level), Nebraska's growth rate of 3.3 percent was fifth in the region. The industry having the highest rate of employment growth in Nebraska over the period was agricultural services at 4.3 percent. Following in second place in Nebraska was the finance, insurance, and real estate sector with a growth rate of 3.9 percent. This rate earned Nebraska fourth place among the region states.

Early reports indicate that Nebraska enjoyed substantial employment growth during 1988. When the official figures are released from BEA in September, extension of the above analysis period to include 1988 could cause a gain in Nebraska's relative position among the states in several of the industries. The addition of one year's performance to the legacy of the past 20 years, however, may not have a great impact upon the historical trends and relative position of the state's economy.

Summary

A summary of Nebraska's relative position among the economies of the Plains states over roughly the past 20 to 25 years is given in Table 4. Taking all the indicators into account, Nebraska falls in the middle of the seven states. Only one of the indicators in Table 4 did not earn a third or fourth place ranking for Nebraska. The exception was a sixth place rank in nonfarm income. This sluggish performance of nonfarm income relative to neighboring states needs to be improved in coming years, especially if the farm sector can not sustain its recent record of income growth.

Minnesota has been the clear economic growth leader in the Plains region over the period analyzed, ranking first in all but one of the broad indicators in Table 4. This dominance is mostly due to the dynamic growth of the Twin Cities metropolis. Inconsistency across indicators marks the behavior of Iowa, Kansas, Missouri, and the Dakotas. The two areas of consistency have been Minnesota's top rankings and Nebraska's middle rankings.

Rebecca (Cox) Hofrock was an undergraduate research associate with the Bureau in the spring semester. She is a senior in accounting from Henderson, Nebraska.

Per Capita Income in Metropolitan Nebraska

Data for 1987 per capita personal income for metropolitan areas have been released by the Bureau of Economic Analysis. These data show that per capita personal income growth in 1987 for Nebraska's two metropolitan areas was below the national average. The data also show that per capita income for Nebraska's metropolitan areas continues to lag the average for the nation.

In 1987, the Omaha-Bellevue-Council Bluffs area had a per capita personal income of $15,033, 120th of the nation's 318 metropolitan areas. The Omaha area's per capita income was 97.1 percent of the U.S. metropolitan average. The Omaha area's growth in per capita income from 1986 to 1987 was 4.6 percent, well behind the U.S. growth rate of 6.0 percent.

Lincoln's growth rate at 5.9 percent nearly matched the nation's growth rate. Nevertheless, Lincoln's per capita income of $14,373 was only 92.8 percent of the U.S. level. Lincoln's per capita income ranks 147th in the nation.

Nebraska has only one county (Dakota) in the Sioux City, Iowa metropolitan area. Although the growth in per capita income from 1986 to 1987 for the Sioux City metropolitan area was an impressive 8.4 percent (due in part to a small decrease in measured population), the per capita income of $13,926 placed the area 169th in the national ranking, 89.9 percent of the U.S. average. Sioux City's income growth narrowly missed joining the ranks of the top ten fastest growing areas in the U.S.

Small, But Large

Douglas and Sarpy are two of the smallest counties in Nebraska in terms of land area, ranking 91st and 93rd, respectively. In 1987, however, they ranked first and second in the state when measured by population density. Douglas County had a population density of 1,247.7 persons per square mile, while Sarpy County boasted 406.7 persons per square mile.

New York County, New York averaged 67,960 persons per square mile.

Terms to Know

The Federal Reserve and Monetary Policy

Why should Nebraskans be concerned about a small nonelected group called the Federal Open Market Committee that meets regularly in Washington, D.C.? This committee determines the level of money available to the U.S. economy. The Open Market Committee is an arm of the Federal Reserve System (the Fed). The latter is the U.S. version of a central bank, sometimes referred to as the banker's bank. The role of the Federal Reserve is twofold: it regulates member banks (not savings and loans) and it sets monetary policy. Monetary policy controls the level of (spendable) liquid assets available to the nation's consumers. There are two closely related factors that form the basis of monetary policy. These factors are the nation's money supply and prevailing interest rates.

For the typical Nebraskan, the Fed determines the availability of loan funds directly and the interest paid on loans and assets held in the form of savings and CDs indirectly.

The monetary policies of the Fed control the direction of the economy—whether the economy expands or contracts. One problem in formulating monetary policy is the interlocking relationship between the money supply, economic growth, and inflation. Two extreme cases illustrate this problem. Consider a case where the economy is awash in money. Excessive money growth would overheat the economy, and rampant inflation soon would ensue. This inflationary period would be followed by a severe recession. Thus, a cheap money policy would bring a severe business cycle, perhaps even hyperinflation such as that experienced in Brazil.

At the other extreme, a stringent (tight) money policy can restrain an economy's potential. Recessions can be caused by an excessively severe monetary policy.

The on-going problem faced by the Fed is to formulate the correct monetary policy for the current situation. This is not easy, as information on the current and future position of the economy is imperfect. The Federal Reserve must determine the future course for the money supply at the same time it is trying to determine where the economy is headed. Furthermore, the impact of a change in monetary policy on the economy occurs over a long period. An analogy is a shower head some distance from the water heater. Slight adjustments with the faucet can cause wide swings in water temperature. Sometimes you get burned, sometimes you freeze.

There are two data series to watch in tracking the Fed's actions. The first is a series called M2. M2 is defined as the amount of cash in circulation plus checking and small savings accounts at banks and thrifts plus funds on hand in money market mutual funds. M2 represents the amount of liquid (spendable) assets available to the public. This series is published in weekly and monthly form on a seasonally adjusted basis. The weekly series is readily available in daily business publications. The variation in weekly M2, however, makes it difficult to detect trends. The monthly series is more stable, but is not as readily available as the weekly series. There is also a slight lag in its reporting.

The other indicator is the federal funds rate. Federal funds represent short-term borrowing among banks. The federal funds rate is the interest rate charged on those funds. The rate is available daily in the *Wall Street Journal*. Many analysts believe that changes in monetary policy will appear quickly in the federal funds rate.

Other interest rates in the economy are tied to changes in the federal funds rate, although the relation of long- and short-term interest rates is not a static one. (See this month's short on the inverted yield curve.)

John S. Austin

The Inverted Yield Curve

Short-term interest rates have been increasing steadily over the past year. Long-term rates have risen, but not as rapidly as yields on short-term financial instruments. Long-term rates have fallen in recent weeks. The product of this unusual situation is the inverted yield curve. Some analysts feel an inverted yield curve is a predecessor of recession, but the current situation differs in several respects.

The yield curve is the result of plotting interest rates for investment instruments by increasing maturity dates. The figure below shows two recent yield curves from a *Wall Street Journal* article on June 26, 1989. The two yield curves are for May 26, 1989 and June 26, 1989.

The behavior of the yield curves shown is not typical. Typically, long-term interest rates are higher than short-term rates, reflecting investor demands for a higher interest premium on long-term investments. But in the figure below, long-term interest rates are lower than short-term rates for both periods. The yield curves for the two periods are unusually flat. The June 26 yield curve lies below the May 26 curve, showing an overall decline in short- and long-term interest rates.

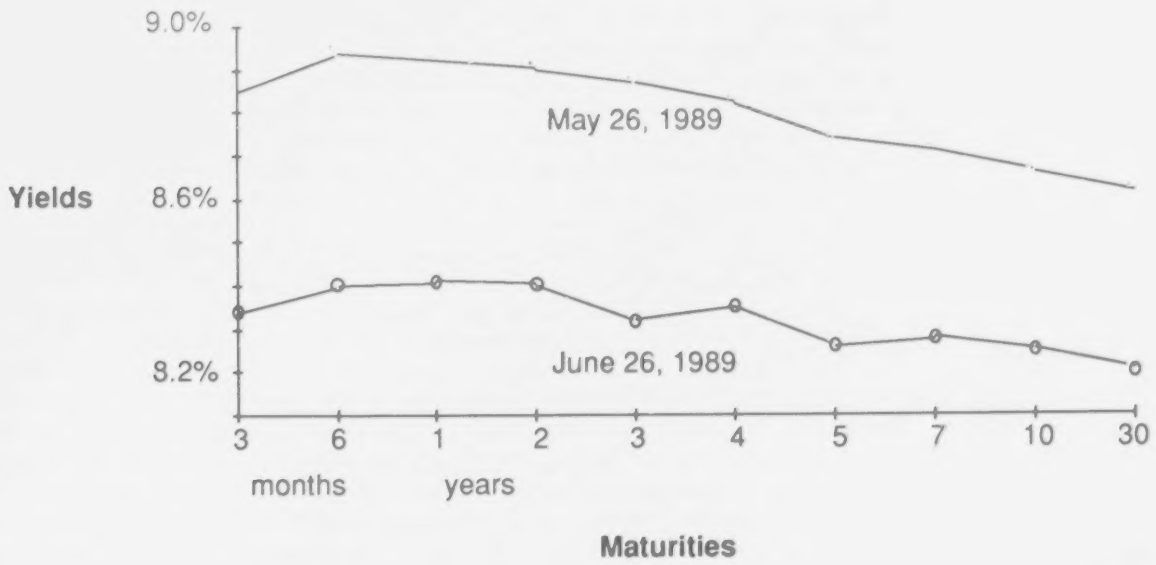
It commonly is posited that an inverted yield curve means investors believe inflation will decrease in the future. It also is theorized that a relationship exists between an inverted yield curve and recession. According to a recent article by the Kansas City Federal Reserve Bank, an inverted yield curve has preceded five of the last seven recessions. Exceptions occurred in 1953 and 1960. The inverted yield curve, however, falsely predicted a recession in the mid-1960s. On numerous occasions, the yield curve has been inverted long before the onset of recession. For example, the inverted yield curve occurred 16 months before the 1980 recession. The inverted yield curve may be a signal of bad times, but it is not a reliable gauge of when a downturn will occur.

There are two important factors that make the current situation different from previous inverted yield curves and recessions. First, long-term interest rates have remained fairly steady. In the past, both long- and short-term rates rose as the yield curve became inverted. Many analysts consider movements in long-term rates more important determinants of the future economy, as long-term rates are more likely to affect spending in home building and other major investment activities. The relative stability of long-term interest rates may indicate that the investment environment for long-term assets has not weakened because interest expense will not seriously erode profit. Thus, economic growth may continue even though the yield curve is inverted.

The second important factor about the current situation involves inventory stockpiles. Previous inversions of the yield curve were associated with inventory accumulation. As firms demanded more short-term debt to finance their extra inventory, short-term rates increased. Subsequently, in order to decrease inventories, businesses cut production, leading to an economic slowdown. Currently, however, inventory stockpiles are not excessive. The inventory-to-sales ratio remains in the 1.5 area.

Harold D. Peck, Jr.

Harold D. Peck, Jr., was an undergraduate research associate in the Bureau of Business Research last semester. Harold has published previously in ***Business in Nebraska****.*



Recommended Reading:

Foreign Ownership in the United States

There is a general perception in the United States that foreign investors are buying up the country. Some recent public opinion polls show that the general public believes that we are permitting foreign investors to dismantle our industries and, at the same time, to make off with our technology.

A recent article by the Morgan Guaranty Trust Company noted that by the end of this year, the recorded value of all foreign direct investment holdings in U.S. industry, commerce, and real estate could reach $380 billion, more than quadrupling during the last decade alone. But the article also noted that foreigners directly own only 4 percent of the U.S. business capital stock and control perhaps 13 percent. These percentages are small by international standards. Foreign-owned capital averages over 10 percent of GNP in most industrial countries. Incidentally, U.S. direct investments abroad had a book value of about $325 billion at the beginning of this year.

Is there any defensible reason to be concerned about foreign investments in the U.S? The following excerpt from the Morgan Guaranty Trust Company article appears to suggest that the answer to this question is no:

The United States stands to benefit handsomely by keeping the inflow of direct investment as free as possible, and not just for its contribution to current account deficit financing. For much of the postwar period, the United States was the free world's primary source of new technology, management skill, and international investment. As the economies of Europe and the Pacific Rim have matured, the United States inevitably has yielded some of its former pre-eminence and now has quite a bit to learn from the achievements of others...

Direct investment inflows will only attain their full invigorating potential in a competitive U.S. economy that offers both a positive welcome and attractive production costs, especially labor costs...

The article is on the Bureau's recommended reading list for those interested in foreign investments in the U.S. For more information, please write to:

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New York, NY 10015

F. Charles Lamphear

Several counties in Alaska and Texas have less than one inhabitant per ten square miles. Arthur, McPherson, and Sioux Counties in Nebraska each average less than one person per square mile.

On The Rise Again . . .

Nebraska Farmland Values Continue to Increase

According to a recent report by the Federal Reserve Bank of Kansas City, nonirrigated farmland in Nebraska increased in value 5 percent during the first quarter of this year. The value of irrigated land increased 4 percent, and ranchland increased 3 percent for the first quarter..

For the fifth consecutive quarter, the largest gain in farmland values in the 10th Federal Reserve District occurred in Nebraska. This district consists of Colorado, Kansas, Nebraska, Oklahoma, Wyoming, and parts of New Mexico and Missouri. Farmland values in the district have increased, on average, 20.7 percent from their low point at the end of 1986.

John S. Austin

Population Shifts Toward Metropolitan Counties

Nebraska's metropolitan counties continue to grow, even though total population in the state has declined in recent years. Since 1980, the metropolitan population has increased more than 44,000 (6.3 percent). Meanwhile the decline in nonmetropolitan population of over 20,000 has offset almost half the metropolitan increase. As a result, Nebraska is rapidly moving toward a point when half the state's population will be in metropolitan areas.

		Population	
Year	State	Metropolitan	Nonmetro
1980	1,569,825	708,018	861,807
1983	1,597,000	730,000	867,000
1985	1,605,000	745,500	859,500
1986	1,598,000	748,000	850,000
1987	1,594,000	752,800	841,200
		Percentage of Total	
1980	100.0	45.1	54.9
1983	100.0	45.7	54.3
1985	100.0	46.4	53.6
1986	100.0	46.8	53.2
1987	100.0	47.2	52.8
		Percentage Change	
1980-1983		3.1	0.6
1980-1985		5.3	-0.3
1980-1986		5.6	-1.3
1980-1987		6.3	-2.4

(Metropolitan counties are: Dakota, Douglas, Lancaster, Sarpy, and Washington.)

Merlin W. Erickson

Review and Outlook

National Outlook

A major concern this year is a return to inflation. What the Federal Reserve can and should do about this fear remains problematical. The current level of inflation has been blamed on increasing energy and food prices. This inflationary pressure is not limited to energy and food prices, however. We are beginning to see general increases across a range of items. The medical care component of the Consumer Price Index (CPI) was 7.3 percent higher this May than a year ago. The "Other Goods and Services" component of the CPI (a catchall category covering tobacco, personal care, and education items) was 7.6 percent higher than a year ago.

Early signs of price increases can lead to an inflation psychology in our price system. If a producer perceives that other producers are raising prices, he or she may raise prices before any actual cost increases.

While the economy appears to be inflating, it also is showing some signs of weakness. Industrial production has shown no growth for the first five months of this year. Retail sales, deflated by the CPI, have expanded little this year.

Another sign of weakness in the economy is the GNP figures for the first quarter. The latest GNP figures for the first quarter of 1989 show a 4.4 percent increase from the previous quarter. The increase is only a modest 1.9 percent, however, after adjusting the GNP figures for the 1988 drought.

The Fed faces a dilemma. Should the Fed tighten the money supply to prevent further inflation, or should the Fed ease credit to stimulate the economy? Lower interest rates likely would lead to increased construction activity. Tighter controls on the money supply may trigger another major downturn, such as the one experienced in 1981-1982.

The Fed can choose to do nothing, thereby maintaining an even keel policy. Given the current abundance of mixed signals, an even keel policy is appealing. Bankers and businessmen know that radical changes in monetary policy are harmful. If a steady course is maintained (that is, if the Federal Reserve sets a policy of gradual or no change), then bankers and businessmen can adjust to new policy directions. It is radical change in policy that

Table I
National Indicators

	Annual		Quarterly (SAAR)			
	1987	1988	1988:II	1988:III	1988:IV	1989:I
Real GNP (percent change)	3.4	3.9	3.0	2.5	2.4	4.4
Real Consumption (percent change)	2.7	2.8	3.0	3.9	3.5	1.3
Housing Starts ($ millions)	1.6	1.5	1.5	1.5	1.6	1.5
Auto Sales ($ millions)	10.3	10.6	10.6	10.6	10.5	9.7
Interest Rate (90 day T-bill)	5.8	6.7	6.2	7.0	7.7	8.5
Unemployment Rate (percentage)	6.2	5.5	5.5	5.5	5.3	5.2
Industrial Production Index (1977=100)	129.8	137.2	136.0	138.4	139.9	140.6
Money Supply, M2 (percent change)	6.6	5.1	7.1	3.8	3.6	1.9

NOTE: SAAR — Seasonally Adjusted at Annual Rates

Table II
Employment in Nebraska

	Revised April 1989	Preliminary May 1989	May % Change vs. Year Ago
Place of Work			
Nonfarm	710,598	715,415	3.2
Manufacturing	97,473	97,762	4.4
Durables	47,512	47,639	2.4
Nondurables	49,961	50,123	6.2
Mining	1,637	1,635	-4.2
Construction	25,926	27,297	7.9
TCU*	47,221	47,432	6.1
Trade	183,174	183,976	3.4
Wholesale	52,613	52,880	5.8
Retail	130,561	131,096	2.5
FIRE**	48,783	49,021	2.4
Services	165,058	165,966	4.6
Government	141,326	142,326	-0.9
Place of Residence			
Civilian Labor Force	816,948	813,227	0.02
Unemployment Rate	2.8%	2.5%	

*Transportation, Communication, and Utilities
**Finance, Insurance, and Real Estate

Source: Nebraska Department of Labor

Table III
Price Indices

	May 1989	% Change vs. Year Ago	YTD % Change vs. Year Ago
Consumer Price Index - U* (1982-84 = 100)			
All Items	123.8	5.4	5.0
Commodities	117.5	5.8	5.0
Services	130.8	5.0	4.9
Producer Price Index (1982 = 100)			
Finished Goods	114.2	6.2	5.5
Intermediate Materials	112.7	6.1	6.4
Crude Materials	106.3	9.5	8.5
Ag Prices Received (1977 = 100)			
Nebraska	161	11.0	14.4
Crops	140	37.3	42.7
Livestock	174	1.2	3.7
United States	151	12.7	13.6
Crops	145	23.9	24.4
Livestock	158	4.6	6.2

U* = All urban consumers
Source: U.S. Bureau of Labor Statistics

leads to complications. Since early 1988, the Greenspan Fed has shown a willingness to make gradual adjustments.

Mortgage rates have been falling since early spring. In March, the 30 year fixed rate mortgage rate was 11.3 percent. In the first three weeks of June, that rate fell to 10.2 percent. Despite that good news, housing starts in May were off 4.6 percent. Builders have become cautious with all the talk of a coming recession. The last thing builders want is a large inventory of unsold units that will consume their cash flow.

The inventory-to-sales ratio in April dropped to 1.49, indicating that businesses are keeping a month and a half of sales in inventory. Retail sales in May edged up a modest 0.1 percent before adjusting for inflation. Whatever measure of inflation is applied, the May figure will show a decrease in retail sales. The May increase followed a robust April increase of 1.0 percent.

The CPI advanced 0.6 percent in May. After removing food and energy prices, the gain was a more modest 0.5 percent. Energy prices increased 1.6 percent due to rising retail gasoline prices. Food prices rose 0.6 percent, led by fruit and vegetable inflation of 3.2 percent. The May CPI was 5.4 percent ahead of last year's figure.

Producer prices jumped 0.9 percent in May. Eliminating the food and energy components, the index increased 0.5 percent. Energy prices swelled 3.3 percent, led by a wholesale gasoline price increase of nearly 29 percent from a year ago. Food prices in May grew 0.8 percent, with fresh and dry vegetable price gains of 26.4 percent. Tomato and celery prices doubled. The inflation in May continues to reflect advances in food and energy prices.

Nebraska Outlook

U.S. winter wheat production was down 9.8 percent from 1988, according to the latest revised figures. Yields for winter wheat were the lowest in 11 years. Nebraska winter wheat production decreases exceeded those of the U.S a whole. Nebraska winter wheat production was off 26.0 percent compared to last year, the smallest crop since 1944.

Building activity in Nebraska is running counter to national trends. Single family homes in Nebraska increased 17 percent through May on a year to date

Table IV
City Business Indicators
March 1989 Percent Change from Year Ago

The State and Its Trading Centers	Employment (1)	Building Activity (2)
NEBRASKA	1.7	18.3
Alliance	2.3	158.1
Beatrice	1.6	32.3
Bellevue	1.0	-17.2
Blair	1.0	2,285.7
Broken Bow	1.9	-33.0
Chadron	1.9	-42.3
Columbus	2.9	197.7
Fairbury	2.4	-79.2
Falls City	1.2	137.4
Fremont	1.4	45.7
Grand Island	1.5	9.9
Hastings	1.9	4.5
Holdrege	1.8	-39.7
Kearney	2.1	-33.5
Lexington	3.8	84.3
Lincoln	1.8	2.3
McCook	1.6	-86.0
Nebraska City	1.7	-25.1
Norfolk	1.6	-27.3
North Platte	1.8	-1.4
Ogallala	1.4	-12.5
Omaha	1.0	16.8
Scottsbluff/Gering	0.9	71.0
Seward	2.9	-41.6
Sidney	3.3	125.4
South Sioux City	0.0	613.7
York	1.4	-23.0

(1)As a proxy for city employment, total employment (labor force basis) for the county in which a city is located is used

(2)Building activity is the value of building permits issued as a spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Cost Index is used to adjust construction activity for price changes

Sources: Nebraska Department of Labor and reports from private and public agencies

Figure I
City Business Index
February 1989 Percent Change from Year Ago

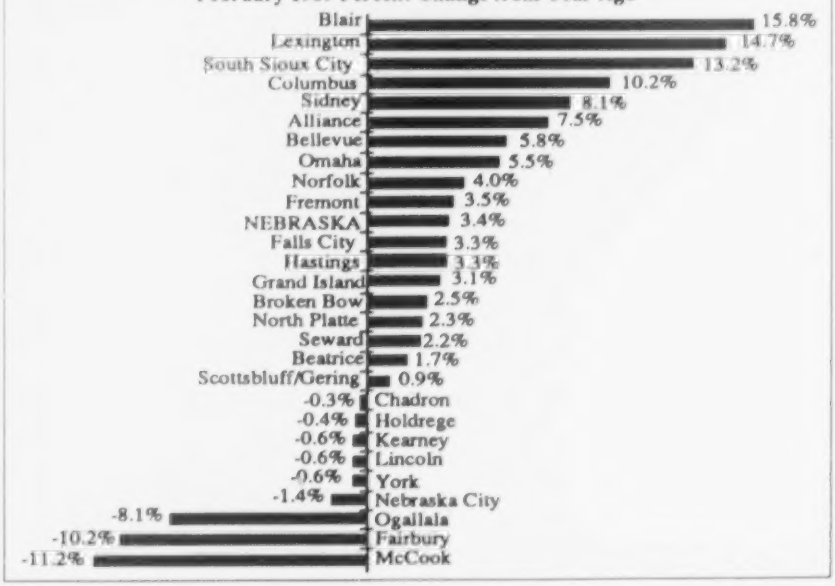
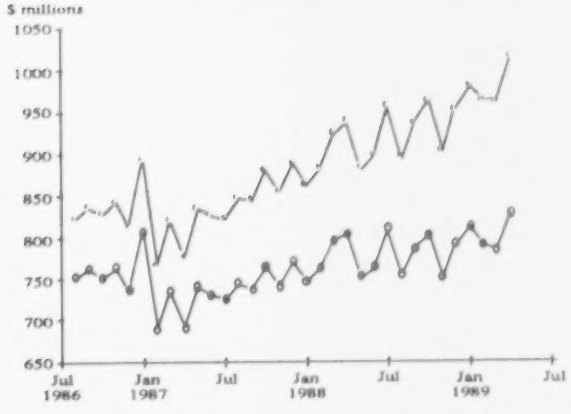


Table V
Net Taxable Retail Sales of Nebraska Regions and Cities

Region Number and City (1)	City Sales (2) Mar. 1989 (000s)	City Sales (2) % Change vs. Year Ago	Region Sales (2) Mar. 1989 (000s)	Region Sales (2) % Change vs. Year Ago	Region Sales (2) YTD % Change vs. Year Ago
NEBRASKA	$876,805	9.3	$1,009,516	8.2	7.1
1 Omaha	302,854	15.2	376,444	12.6	9.4
Bellevue	13,243	19.7	*	*	*
Blair	4,564	5.1	*	*	*
2 Lincoln	112,197	1.4	131,190	1.9	3.1
3 South Sioux City	4,479	13.7	6,574	7.5	-5.8
4 Nebraska City	3,629	3.3	17,451	-4.0	2.1
6 Fremont	15,576	7.5	29,362	2.0	1.8
West Point	2,826	-1.1	*	*	*
7 Falls City	2,182	1.5	9,838	2.6	0.6
8 Seward	4,594	13.2	15,443	1.1	2.0
York	6,550	5.1	16,021	5.3	9.4
10 Columbus	15,115	13.6	28,662	7.9	7.9
11 Norfolk	18,796	16.4	34,072	8.4	8.9
Wayne	2,805	2.0	*	*	*
12 Grand Island	33,264	9.5	47,937	8.3	9.4
13 Hastings	15,376	10.1	25,520	3.3	9.4
14 Beatrice	7,888	4.0	18,490	6.1	3.4
Fairbury	2,471	-3.8	*	*	*
15 Kearney	18,186	5.9	26,758	7.5	12.0
16 Lexington	7,125	28.7	18,200	15.9	13.2
17 Holdrege	4,399	7.8	8,754	8.1	7.8
18 North Platte	14,507	8.6	18,610	8.1	5.6
19 Ogallala	4,054	-14.1	9,696	-2.5	11.2
20 McCook	7,787	-0.9	11,577	3.5	8.2
21 Sidney	3,507	11.4	7,688	24.7	10.5
Kimball	1,656	5.2	*	*	*
22 Scottsbluff/Gering	16,331	0.1	25,342	14.6	11.5
23 Alliance	5,288	9.4	13,910	9.9	7.1
Chadron	2,683	8.4	*	*	*
24 O'Neill	4,043	12.5	13,436	12.7	15.3
Valentine	2,134	7.0	*	*	*
25 Hartington	1,393	-0.6	8,557	-7.6	-0.2
26 Broken Bow	3,562	13.4	12,225	2.9	7.5

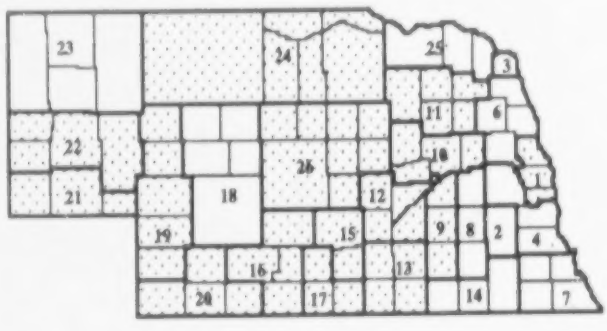
(1) See region map
(2) Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales
* Within an already designated region
Compiled from data provided by the Nebraska Department of Revenue

Figure II
Nebraska Net Taxable Retail Sales
(Seasonally Adjusted)



(1) The Consumer Price Index (1982-84 = 100) is used to deflate current dollars into constant dollars

Figure III
Region Sales Pattern
YTD as Percent Change from Year Ago



Shaded areas are those with sales gains above the state average. See Table V for corresponding regions and cities

basis. The good news on the mortgage rate has evidently resulted in advances in Nebraska construction. The dollar value of total construction in Nebraska is up 6 percent through May, versus the same period a year ago.

Nebraska retail sales (Table V) continue to display strength through the first three months of the year. On a year-to-date basis through March, Nebraska net taxable retail sales were 7.1 percent ahead of a year ago. (Region sales in Table V contain motor vehicle sales, whereas city sales do not). The lackluster performance of national auto sales in recent months is reflected in the March Nebraska motor vehicle sales. That figure is down 3.6 percent from a year ago. With an expected decrease in Nebraska's net farm income this year, the overall strength in the retail sales numbers so far this year should wane.

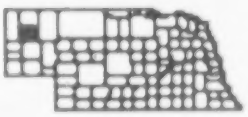
The city business index (Figure I) shows the boom-to-bust nature of construction activity. For example, in Fairbury a single large building project (a school) inflated the activity numbers for the previous nine months. Unless another similar size project is permitted in Fairbury, they are likely to remain on the negative side of the list for the next eight months. Bureau staff members are looking at alternative ways to present city data in order to avoid the boom-to-bust nature of construction activity.

Unemployment in Nebraska remains at low levels. While the U.S. unemployment rate in May was 5.2 percent, the Nebraska unemployment rate was less than half that, 2.5 percent. Once again, Lincoln's unemployment rate was 2.3 percent, while Omaha was above the state rate at 3.0 percent.

John S. Austin

County of the Month

Box Butte



Size of county: 1,067 square miles, ranks 14th in the state
Population: 14,300 (estimated) in 1987, a change of +4.4 percent from 1980
Median age: 27.8 years in Box Butte County, 29.7 years in Nebraska in 1980
Per capita personal income: $14,509 in 1987, ranks 26th in the state
Net taxable retail sales ($000): $76,680 in 1988, a change of +14.6 percent from 1987; $18,450 during January-March 1989, a change of +10.9 percent from the same period one year ago
Number of business and service establishments: 375 in 1986; 62.7 percent had less than five employees
Unemployment rate: 3.9 percent in Box Butte County, 3.6 percent in Nebraska for 1987
Nonfarm employment (1988):

	State	Box Butte County
Wage & salary workers	688,146	5,337
	(percent of total)	
Manufacturing	13.8%	8.6%
Construction and Mining	3.8	1.5
TCU	6.5	36.2*
Retail Trade	18.5	13.5
Wholesale Trade	7.3	4.5
FIRE	7.0	4.0
Services	23.0	13.9
Government	20.1	17.8
Total	100.0%	100.0%

*Large percentage due to concentration of transportation industry

Agriculture:
Number of farms: 556 in 1987, 543 in 1982
Average farm size: 1,149 acres in 1987
Market value of farm products sold: $90.1 million in 1987 ($162,000 average per farm)

Sources: U.S. Bureau of the Census, U.S. Bureau of Economic Analysis, Nebraska Department of Labor, Nebraska Department of Revenue

Merlin W. Erickson

Business in Nebraska

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